PREPARING A COMPREHENSIVE PANDEMIC PLAN FOR A UNIVERSITY COMMUNITY

Elizabeth Alexandra Hosmanek, JD
Program Associate, University of Iowa
University Hygienic Laboratory
Institute for Public Health Practice
elizabeth-hosmanek@uiowa.edu

4226.1: Tuesday, November 6, 2007 – 2:30 PM
WCC, 154B

ABSTRACT #148192

American universities are a major resource for their communities. They often are a major employer; provide an attraction for businesses and recreational development; and housing for thousands of individuals. History also demonstrates that universities can be greatly impacted by a pandemic. Such institutions provide education for thousands of individuals from around the world. These institutions frequently are engaged in research projects that establish routine business practices in parts of the world even more diverse than the student population. In addition, many of these institutions house health science resources, which would provide services and staff in demand during a pandemic.

Nevertheless, despite the potential impact of a pandemic on the university, many institutions are only in the early stages of comprehensive pandemic plan development. Additionally, many of these rudimentary plans are not aligned with their surrounding community or state plans.

This presentation will review the ongoing effort to develop a pandemic plan at the University of Iowa. Additionally, it will describe how information from this process has been refined to provide guidance to other colleges and universities through either the State Board of Regents or the Centers for Disease Control and Prevention's Centers for Public Health Preparedness Collaborative. Plan details will be presented describing applications in the areas of health care, public health, continuity of operations, and communications. Finally, strategies for the alignment of these plans with the community, Incident Command and National Incident Management System models will also be discussed.

LEARNING OBJECTIVES

1) Identify the elements of a comprehensive plan for a university or other academic institution of higher learning.

2) Discuss optional strategies for addressing the challenges a pandemic would present to a university.

3) Develop a university-specific pandemic plan based on models used on other campuses .

Common Terminology

- **Avian Influenza ("bird flu"):** a respiratory illness caused by a virus usually found only in birds. Highly pathogenic H5N1 is capable of transmission from birds to humans with about 60 percent mortality rate.
- **Pandemic Influenza ("pan flu"):** a virulent flu virus that causes a global outbreak. The disease can spread easily from person to person because there is little human immunity.
- **Seasonal Influenza ("seasonal flu"):** a respiratory illness caused by a virus that can be transmitted from person to person
  - Results in approximately 36,000 U.S. deaths every year
  - Complications can include bacterial pneumonia, ear infections, sinus infections, dehydration, and worsening of chronic medical conditions
  - Vaccine developed every year based on new predicted strains. In general anyone who wants to reduce their chance of getting seasonal flu can get vaccinated

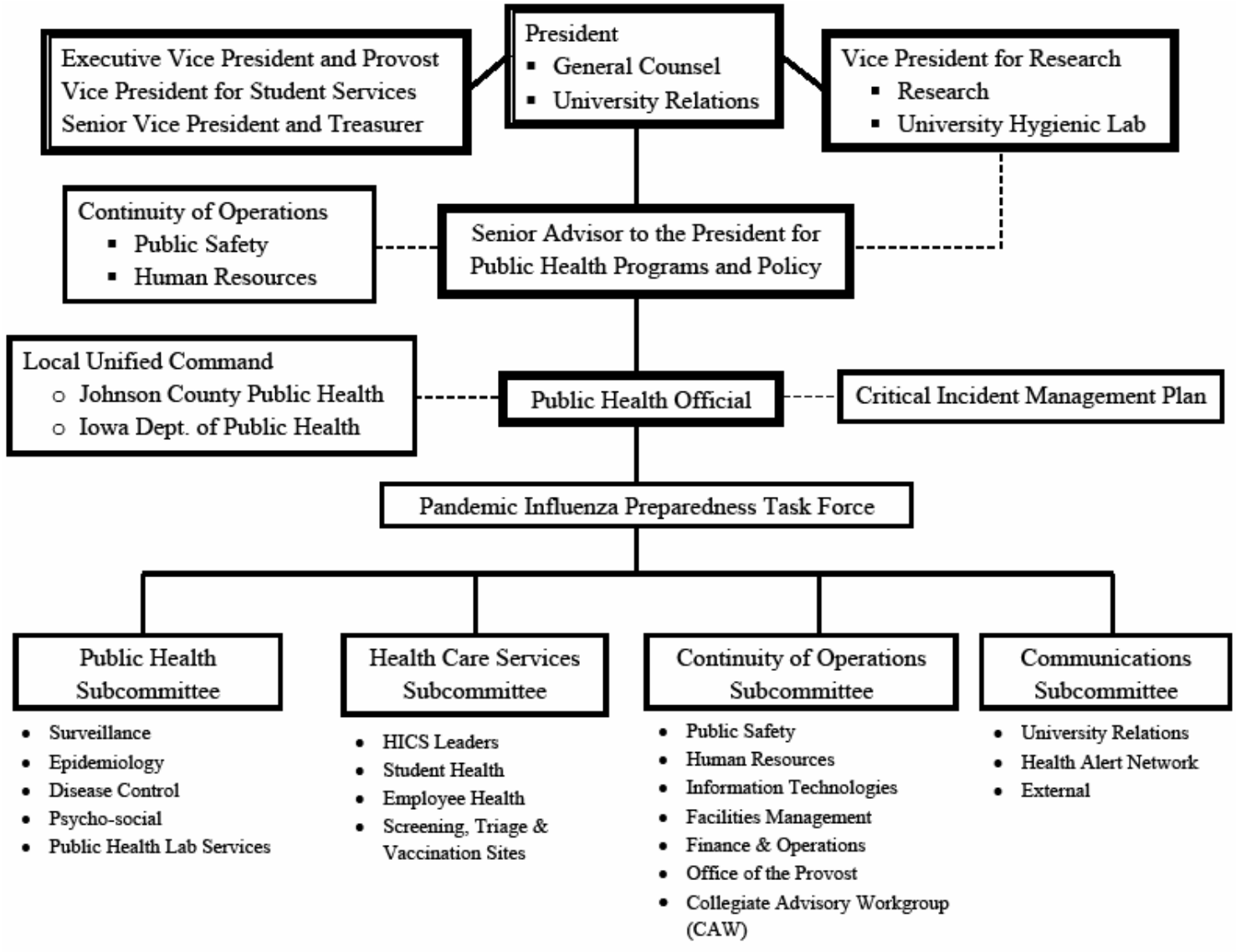
Historical Perspectives

- Currently, there is NO pandemic flu!
- Historically, three pandemics occur each century:
  - 1918, 1957, 1968 are most recent
  - 1918 pandemic resulted in some 500,000 U.S. deaths
  - Experts state we are overdue for a severe pandemic
- H5N1 is a strain of *bird* flu being closely monitored.
  - First deaths in 2003. Virus continues to mutate. Cannot spread efficiently from person to person at this time. Most human cases resulted from direct contact with diseased poultry.
  - As of 10/17/2007, WHO reported 331 cases with 203 deaths (approximately 61 percent mortality rate).
- The next pandemic might be caused by a completely different strain. Opinions vary widely.

Community and Statewide Partners: Building and Sustaining Relationships

- Iowa Department of Public Health (IDPH)
- Iowa City government officials and businesses
- Johnson County Public Health (JCPH)
- Mercy Hospital, Iowa City
- American Red Cross, Grant Wood Chapter
- Veterans Affairs Medical Center (VAMC)
- Other Iowa Regents schools:
  - Iowa Braille and Sight Saving School
  - Iowa School for the Deaf
  - Iowa State University
  - University of Northern Iowa

University of Iowa Preparedness Task Force Organizational Chart



Outline of FY 2007 Plan

- Plan Authorization
- Executive Summary
- Introduction, Basic Plan, Concept of Operations
- Organization and Responsibilities
- Plan Review and Maintenance
- Section A – Plan Structure, Development, Coordination and Evaluation
- Section B – Public Health Services: Surveillance, Epidemiology and Disease Control
- Section C – Health Care Services
- Section D – Continuity of Operations: Education, Health Services and Research
- Section E - Communications

Pandemic Planning Assumptions

1) An effective vaccine may not be available for six months.
2) Antivirals cannot be used indefinitely for treatment or prophylaxis.
3) Federal projections for a severe pandemic are:
   - 35 percent of population ill; 15 percent require treatment; 2 percent mortality
4) Nonpharmaceutical Interventions (NPIs) reduce social density and may be an effective way to reduce transmission of illness.
5) Significant social and economic disruptions may result from a variety of factors including high rates of absenteeism; voluntary or mandatory restrictions of movement for goods and persons; and high demand for services, including healthcare.
6) Educational plans are necessary to educate organizational members and their families about:
   1) Current emergency plans and protocols;
   2) Nonpharmaceutical measures to limit infection (social distancing, quarantine & isolation, hygiene);
   3) Individual responsibility to limit the spread of infection and increased readiness at home; and
   4) Planning at organizational, local, state and federal levels.

FY 2007 Task Force Activities

- FY 2007 Plan and Progress Report unanimously approved by Task Force members in attendance during June 27, 2007 Task Force meeting
  - Both presented to President Mason in August
- Materials reviewed for guidance originated from the state of Iowa, cities across the United States of varying sizes, the Centers for Disease Control and Prevention, the Department of Homeland Security, the Department of Health and Human Services, and the World Health Organization.

Activity Highlights...continued

- **Website established:** https://www.uiowa.edu/~crisis/pandemic/index.html
- **Tabletop Exercise: April 19, 2007**
  - Final Report completed
  - Sixty-five participants from across campus role-played through a fictional scenario designed to prompt rapid decision-making and test current Pandemic Plan
    - Advanced exercise approached "simulation" of an actual event
  - Tested NIMS/ICS; communications; coordination with external organizations; ability to care for students, faculty and staff
- **Regentswide Workshop: June 6, 2007**
  - Final Report submitted to Board of Regents for distribution
  - Fifty-four participants from all Iowa Regents' schools met to discuss pandemic planning efforts and cross-cutting issues requiring coordination and policy decisions

Tabletop Exercise Pictures

Tabletop Exercise Lessons Learned

- National Incident Management System (NIMS):
  - Develop UI protocol for NIMS activation
  - Create a NIMS Team with alternates identified
  - Develop job action sheets for all NIMS positions
  - Encourage completion of online training for all UI personnel in decision-making positions
  - Coordinate with JCPH to create a Joint Information Center (JIC)
- Align Pandemic Plan with UI Critical Incident Management Plan (CIMP)
- Encourage familiarity with emergency plans and protocol by providing educational presentations
- Exercise at least once per year to test the Plan – build from tabletops to functional exercises.
- Don't let perfect be the enemy of good!

Cumulative Lessons Learned

1) A public health emergency is different from a natural disaster or terrorist attack in that human infrastructure will be impacted, whereas physical infrastructure such as buildings will likely not be impacted at all.
2) Continuity of Operations will influence every aspect of pandemic planning. Determine what core functions must continue, who will perform these functions, and who are the back-ups. Roles must be defined and understood. Multiple "hat-wearing" that occurs during normal times will not be an option during an emergency.
3) Build consensus for pandemic planning by relating usefulness to all-hazards planning. Good communications and continuity plans are necessary for any emergency. Most large-scale natural or terrorist disasters can also be considered public health emergencies (9/11 and Hurricane Katrina).

Lessons Learned...continued

4) Communications will always be critical to maintain credibility: how you say the message, who provides the message, intended audience, frequency of updates.
5) Every member of the response team must speak the same language. UI actions will follow these phases: Alert/Standby; Limited Services; Full Services; and Recovery. Identify who must receive training, including NIMS training, to ensure all team members know their responsibilities and how to perform their roles.
6) Plans and Job Action Sheets must be detailed enough to guide a concerted response, but straightforward enough for a layperson to follow. Personnel may be transferred to different areas during an emergency, buy they may not be familiar with department procedures and need guidance to effectively perform job duties.

Ongoing Pandemic Plan Education and Seasonal Influenza Campaign

- FY 2007 on-campus presentations:
  - Human Resources Unit Representatives
  - Office of Vice President for Research
  - Facilities Management Public Safety Conference
- Seasonal influenza vaccination and awareness campaign: goal is to vaccinate 4,000 UI students
- UI-PHESVAR (Public Health Emergency Student Volunteer Advanced Registration)
  - General Information Form obtains basic background information including skills and certifications
  - Basic training through Prepare Iowa Learning Management System (PI-LMS) mandatory for all registered volunteers

Individual and Community Mitigation Strategies

- Individual
  - Hand hygiene (washing and use of hand sanitizer)
  - Disinfect smooth surfaces regularly
  - Cough etiquette (cough into sleeves, not hands)
  - Maintain 3 feet + distance from other people, 6 feet is optimal
- Community
  - Social Distancing
    - Suspend large gatherings and events (sporting and cultural)
    - School/daycare closures
    - Quarantine for exposed
    - Isolation for ill
  - Establish flexible work-leave policies
  - Increase remote access, decrease in-person meetings

Key Next Steps for FY 2008

1) Collaborate with Student Health Services to develop UI-PHESVAR (Public Health Emergency Student Volunteer Advanced Registration).
2) Develop proposed guidelines for NIMS structure at the UI.
3) Develop model academic policies for a public health emergency.
4) Identify what information from students is needed to maximize planning efforts and efficacies.
5) Develop an individual planning guide for students, faculty and staff.
6) Develop standard protocol and guidance for nonmedical environments.
7) Develop a plan to track UI community members during a public health emergency.
8) Develop a plan to open and operate information hotlines.

Summary of Recurring Observations

1) HUGE range of issues: Pandemic planning involves *far more* than keeping people from contracting and spreading illness.
2) Include all the relevant stakeholders: academic community (students, staff and families), local and state public health, law enforcement, healthcare providers, unions, contractors, suppliers, etc.
3) A commitment to preparedness is necessary: The Preparedness Cycle includes Planning, Training, Exercising, and Evaluation.
4) Time spent building consensus for planning is never wasted. Be ready to explain in-depth why the project is important, what resources are necessary, and the positive impact pandemic planning has on all-hazards planning.
5) Some ability to perform core functions remotely is necessary.
6) Communications are the best "vaccine" against panic.
7) Plans don't need to be perfect; they do need to be adequate.

RESOURCES AND REFERENCES

- Centers for Disease Control and Prevention: www.pandemicflu.gov
- Department of Health and Human Services: www.hhs.gov/pandemicflu/plan
- Iowa Department of Public Health: www.idph.state.ia.us
- Johnson County Public Health: www.johnson-county.com/publichealth/index.shtml
- Occupational Safety and Health Administration: www.osha.gov/Publications/OSHA3327pandemic.pdf
- University of Iowa:
  - Atchison, Christopher (Task Force Chair): chris-atchison@uiowa.edu
  - Hosmanek, Elizabeth (Facilitator): elizabeth-hosmanek@uiowa.edu
  - Pandemic website: www.uiowa.edu/~crisis/pandemic/index.html
- World Health Organization: www.who.int/csr/disease/avian_influenza/en/index.html